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SEQUENCE LISTING

\ENDOU, Hitoshi <110> KANAI, Yoshikatsu SEKINE, Takashi HOSOYAMADA, Makoto

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gtg ggg ggt gtc ggc cgc ttc cag dag atc cag gtc acc ctg gtg gtc 342 Val Gly Gly Val Gly Arg Phe Gln Gtn Ile Gln Val Thr Leu Val Val 20 15

ctc ccc ctg ctc ctg atg gct tct cad aac acc ctg cag aac ttc act 390 Leu Pro Leu Leu Met Ala Ser His Asn Thr Leu Gln Asn Phe Thr

get gee ate cet ace cae cae tge ege edg eet gee gat gee aac ete Ala Ala Ile Pro Thr His His Cys Arg Pro Pro Ala Asp Ala Asn Leu 50

agc aag aac ggg ggg ctg gag gtc tgg ctg ccc cgg gac agg cag ggg 486 Ser Lys Asn Gly Gly Leu Glu Val Trp Leu Pro Arg Asp Arg Gln Gly 65 60

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ttt ctc aat ggc aca gaa gcc aat ggc aca ggg gcc aca gag ccc tgc Phe Leu Asn Gly Thr Glu Ala Asn Gly Thr Gly Ala Thr Glu Pro Cys 90 105	582
acc gat ggc tgg atc tat gac aac agc acc ttc cca tct acc atc gtg Thr Asp Gly Trp Ile Tyr Asp Asn Ser Thr Phe Pro Ser Thr Ile Val 110 115	630
act gag tgg gac ctt gtg tgc tct cac agg gcc cta cgc cag ctg gcc Thr Glu Trp Asp Leu Val Cys Ser His Arg Ala Leu Arg Gln Leu Ala 135	678
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tac ctt gca gac agg cta ggc cgc cgg aag gta ctc atc ttg aac tac Tyr Leu Ala Asp Arg Leu Gly Arg Arg Lys Val Leu Ile Leu Asn Tyr 165	774
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ccc atc tac tgc gcc ttc cgg ctc ctc tcg ggc atg gct ctg gcc Pro Ile Tyr Cys Ala Phe Arg Leu Leu Ser Gly Met Ala Leu Ala Gly 190 195	870
atc tcc ctc aac tgc atg aca ctg aat gtg gag tgg atg ccc att cac Ile Ser Leu Asn Cys Met Thr Leu Asn Val Glu Trp Met Pro Ile His 215	918
aca cgg gcc tgc gtg ggc acc ttg att ggc tat gtc tac agc ctg ggc Thr Arg Ala Cys Val Gly Thr Leu Ile Gly 220 230	966
cag ttc ctc ctg gct ggt gtg gcc tac gct gtg ccc cac tgg cgc cac Gln Phe Leu Leu Ala Gly Val Ala Tyr Ala Val Pro His Trp Arg His 245	1014
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Arg Glu Glu Gly Ala Lys Leu Ser Met Glu Val Leu Arg Ala Ser Leu 300 305 310	
cag aag gag ctg acc atg ggc aaa ggc cag gca tcg gcc atg gag ctg Gln Lys Glu Leu Thr Met Gly Lys Gly Gln Ala Ser Ala Met Glu Leu 315 320 325	1254
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tgg ttt gcc act agc ttt gca tac tat ggg ctg gtc atg gac ctg cag Trp Phe Ala Thr Ser Phe Ala Tyr Tyr Gly Leu Val Met Asp Leu Gln 350 350	1350
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July 1

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Lys Gln Thr Arg	545	550	
Gln Ala Ser\Ala	560		gaaggggeee
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qaaqaggaaa tggt	gaccca agtgtgggg	a caggicticg geodore g ttgtggttca ggaaagc c cacatcatta aaaggtt	tga ctgcgaaaaa 2156
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1	5 n Val Thr Leu Va	l Val Leu Pro Leu Le	u Leu Met Ala
Gin Gin Tie Gin 20	n var	25	0 Thr His His
Ser His Asn Th	r Leu Gln Asn\Pn	e Thr Ala Ala Ile Pr 45	as too Clu
Cys Arg Pro Pr	o Ala Asp Ala As	n Leu Ser Lys Asn Gl 60	y GIY Leu GIu
50	55 \ Ara Asp Arg Gl	n Gly Gln Pro Glu Se	er Cys Leu Arg
Val Tip Led Fi	70	75	V Thr Glu Ala
Phe Thr Ser Pr	o Gln Trp Gly Le	Pro Phe Leu Asn Gl	95
Asn Gly Thr Gl	y Ala Thr Glu Pr	CO Cys Thr Asp Gly Ti	tp lie lyr Asp
Asn Ser Thr Ph	ne Pro Ser Thr II	le Val Thr Glu Trp As	sp Leu Val Cys 25
Ser His Arg A	la Leu Arg Gln L	eu Ala Oln Ser Leu T	yr Met Val Gly
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145	150	155	la Val Ser Gly
Arg Arg Lys V	al Leu Ile Leu A 165	sn Tyr Leu In Thr A	175
Thr Cys Ala A	la Phe Ala Pro A 80	sn Phe Pro Ile Tyr C	190
Leu Leu Ser G	ly Met Ala Leu A	ala Gly Ile Ser Leu A	205
Leu Asn Val G	Glu Trp Met Pro I 215	tle His Thr Arg Ala C	Cys var Gly Ini
Leu Ile Gly T	Tyr Val Tyr Ser I	Leu Gly Gln Phe Leu 1	Leu Ala Giy vai
225	230 Val Pro His Trp A	Arg His Leu Gln Leu 1 250	Leu Val Ser Ala
Ala Tyr Ala	245	250	Ile Glu Ser Ala
Pro Phe Phe	Ala Phe Phe Ile ' 260	Tyr Ser Trp Phe Phe 265	270
Arg Trp His	Ser Ser Ser Gly	Arg Leu Asp Leu Thr 280	285 Ara Leu

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G	11.	Arg	Val	Ala	Arg	Ile	Asn	GIY	гаг	Arg	GIU	300	0+1				
	/	290					295		-	C15	Tare	Glu	Leu	Thr	Met	Gly	
s	er	Met	Glu	Val	Leu	Arg	Ala	ser	ьeu	Gln	315	Olu				320	
3	05					310			_	T	217	Cva	Dro	Thr	Leu	Arq	
τ	vs	Glγ	Gln	Ala	Ser	Ala	Met	Glu	Leu	Leu	Arg	Cys	FLO	1111	335	J	
_	7 -	1	\		325					330	1		mb se	cor	Dhe	Δla	
Ľ	He	Leu	Phe	Leu	Cys	Leu	Ser	Met	Leu	Trp	Phe	Ala	THE	SET	FIIC	7114	
1	113	ДСи	7	340	•				345			_		350	71.	TT 220	
		The rec	GIV	\T.eu	Val	Met	Asp	Leu	Gln	Gly	Phe	Gly	Val	ser	116	TÀT	
			355	,,, 1	тЪо	Dhe	Glv	Ala	Val	Asp	Leu	Pro	Ala	Lys	Leu	Val	
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,	Ala	Leu	Leu	Leu	. A l a	Gly	He	Cys	TIE	410	шси		1		415		
					405				_	410	71-	Val	T.e.1	เสาง	Lvs	Gly	
	Gln	Asp	Gln	Ser	lle	\Val	Arg	Thr	Ser	Leu	Ата	. vai	БСС	430	-1 - 1	Gly	
		- 1		420)	\			425	5		_	ml	- 77.	, , (3)	1 T.e.11	
	Ctre	T.eu	Δla	Ala	Ser	. Phe	Asn	. Cys	116	e Phe	Lev	тут	Thi	. Gry	GIL	1 Leu	
	Cys	БСи	135			\		440	1				445	,	50 1	. 1/0+	
	m	D	The	, - Mot	- Tle	Arc	Glr	Thr	Gly	y Met	: Gly	/ Met	: G13	y Ser	rini	Met	
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	_	450			- Coa	- T]-	- T/2	Ser	· Pr	o Let	ı Val	l Sei	Met	Thi	c Ala	a Glu 480	
	Ala	Arg	ya.	LGI	y ser	470	7.				475	5				480	
	465			_			- TO	Dhe	ъ т1.	e ፕህነ	r Gly	, Ala	a Va	l Pro	o Va	l Ala	
	Leu	ı Tyr	Pro	se:	r Mei	- F Pro) nei	1/ 1.11		490)	•			49	l Ala 5	
					48			. 1	, Dr	പടി.	ւ լ Th	r Lei	u Gl	y Gl	n Pr	o Leu	
	Ala	Sex	c Ala	a Va	l Th	r va	т ге	n ne	7 EV	- OI				51	0	o Leu	
	Pro	Ası	o Th	r Va	1 Gl:	n As	p Le	u GI	u\se	I AL	9 11.	b vi	52	5	_	n Lys	
		_	51	5				52	o ∖₋	_	~ 1	mb	J∠ ~ 7~	a G1	n Gl	n Gln	
	Gli	1 Al	a Gl	y Il	е Ту	r Pr	o Ar	д Гу	s G√l	'А гА	s GI	11 111	v T WT	9 01		n Gln	
		53	0	-	_		53	5	,	\	_	54	U 7.7	- 01	n (1	11 TAZG	
	G1:	ı Hi	. G1	n Lv	s Tv	r Me	t Va	l Pr	o Le	eu\G1	n Al	a Se	r Al	a Gi	11 61	u Lys 560	
	54			1	-	55	0				55	5				500	
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	9,	rate	auuu	a da	ccaa	qqaa	gaa	ggag	gag	cagc	caag	ga g	gctg	ccyc	U UU	cccaca	ct 180
	a 9	7266	+ כממ לבכביי	∼ر art	cado	tccc	gqa	gcaa	CCC	agct	gcgg	ag g	caac	ggc	y cg	ctgctc cctcag	CC 240
	90	-ayc	~~~	a 20	יאמרא	aaca	gac	agac	aga	caga	ggtc	ct g	ggac	tgga	s 35	cctcag cag c	ag 294
	C	cage	yaay	y ac	agea ageta	ממכט	taa	ccca									
	C	ccag	ccac		وعدي	2200	-55		Met	Āla	Phe	Asn	Asp	Leu	Legu	ı Gln G	TU
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	g	tg g	igg 9	gt g	gtc g	igc c	gc t	inc C	ay (uny e	1e (ז מוני	al '	Thr I	Leu V	/al\Val	
	V	al G	ly (3ly V	/al (Hy F	arg I	ne G	2T11 (ר זודים	.10					/al Val	

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	ctg Leu	cag	cta	ctg	gtc	tct	gcg	cct	ttt	ttt	gcc Ala	ttc Phe	ttc Phe	atc Ile	tac Tyr	tcc Ser	1062
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	gac Asp	ctc Leu	acc Thr	ctg Leu 285	agg Arg	gcc Ala	ctg Leu	cag Gln	aga Arg 290	gtc Val	gcc Ala	cgg Arg	atc Ile	aat Asn 295	ggg ggg	aag Lys	1158
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gag acc ctg ggc cag cca ctg cca gac acg gtg cag gac ctg gag Glu Thr Leu Gly Gln Pro Leu Pro Asp Thr Val Gln Asp Leu Glu 510 520	agc 18 Ser	330
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Asn Gly Leu